

REMARKS

This is in response to the Official Action currently outstanding with regard to the above-identified application, which Official Action the Examiner has designated as being FINAL.

Claims 6, 7, 10-19, 22-36 and 38-40 were pending in this application at the time of the issuance of the currently outstanding Official Action. By the foregoing amendment, Claims 6 and 7 have been amended, and Claims 41 and 42 have been added. No claims have been canceled and no claims have been withdrawn. Accordingly, in the event that the Examiner grants entry to the foregoing amendment, Claims 6, 7, 10-19, 22-36 and 38-42 will constitute the claims under active prosecution in this application.

The claims as they will stand in the event that the Examiner grants entry to the foregoing amendment are set forth above as required by the Rules.

In the currently outstanding Official Action, the Examiner has:

1. Acknowledged Applicant's claim for foreign priority under 35 USC 119 (a) – (d) or (f), and confirmed the receipt by the United States Patent and Trademark Office of the required certified copies of the priority document therefor;
2. Indicated that the drawings as filed on 26 February 2004 have been accepted;
3. Provided Applicant with a copy of a Form PTO-892 listing an additional reference apparently cited by him as being pertinent to Applicant's disclosure;
4. Indicated that Claims 10-19, 22-36 and 38-40 are allowed;

5. Rejected Claim 6 under 35 USC 102(b) as being anticipated by the Katayama reference (US Patent 5,875,167); and
6. Indicated that Claim 7 would be allowable if rewritten in independent form including all of the limitations of its base claim and any intervening claims for the reasons stated by Applicant in its response of 3 January 2005.

Further comment with regard to items 1-4 above is not deemed to be necessary in this Response.

With respect to item 6 first, Applicant respectfully notes that the foregoing amendment presents Claim 7 in independent form including all of the limitations of its base claim (Claim 6) and any intervening claims. Accordingly, in view of the Examiner's comments in the currently outstanding Official Action, Applicant respectfully submits that if Claim 7 as hereinabove amended is granted entry by the Examiner, that claim is now in condition for allowance in accordance with 37 CFR 1.116. A decision granting entry to and allowing Claim 7 as hereinabove amended in response to this communication, therefore, is respectfully requested.

With respect to items 5, Applicant respectfully notes that in response to the Examiner's previous rejection of Claim 6 Applicant requested reconsideration for the following reasons. Claim 6 is directed to a lens having a plane surface wherein the normal to the plane surface virtually conforms to the optical axis of the lens, and wherein the plane surface has a reflecting part that reflects light within a predetermined waveband and transmits light outside of the predetermined waveband. This argument was in response to the Examiner's allegation that the structure of Claim 6 is disclosed in Figures 16A and 16B of the Katayama reference to which Applicant disagreed.

In particular, it was Applicant's position that a "lens" is an arrangement of dense materials that changes the curvature of a light wave front that impinges thereon. Thus, lenses normally converge or defract incoming parallel light. Of course, in the broadest sense, a "lens" also may include an element that allows an incoming light wave front to pass through it without any change in curvature. Applicant submitted, however, that the latter special situation does not fit within the normal definition of a lens nor does it fit within the meaning of the term "lens" as contemplated by Claim 6. Applicant, therefore, argued that the Examiner's characterization of the aperture control device disclosed by the Katayama reference as being a "lens" within the meaning of that term as utilized in the present application was in error on the basis that the Katayama reference discloses a device that includes a flat, transparent, glass substrate having a planar surface, the normal direction to that planar surface virtually conforming to its optical axis.

The Examiner also alleged that the flat, transparent glass substrate of the Katayama reference is provided with a reflecting part 41 that reflects light within a predetermined waveband and passes light outside of the predetermined waveband. Applicant in turn pointed out, however, that the Examiner's characterization in the latter respect was not entirely accurate (or complete) with respect to the aperture control devices shown in Figs. 16B and 17B of the Katayama reference. Specifically, Applicant noted that, as is shown in Figures 16B and 17B of the Katayama reference, the surface of the "lens" (i.e., in this instance, the substrate plus the films deposited thereon) is not planar as required by Claim 6 of the present application. Further, Applicant argued that it is disingenuous to disregard the films deposited on the surface of the substrate in the determination of whether or not the structure disclosed by Katayama is a "lens" that meets all of the limitations of the Claim 6 of this application. This was particularly the case because the Katayama reference characterizes the *different thickness* films disposed on the planar surface of the glass substrate shown in his Figure 16B as follows at Column 16, lines 14-25:

... The dielectric multilayer film 41 has a function that a light with 635 nm wavelength is all transmitted through and a light with 785 nm wavelength is all reflected. The SiO₂ film 42 has a function that adjusts a phase difference between a light transmitting through the dielectric multilayer film 14 (meaning 41) on the outside of the circular region and the air and the light transmitting through the SiO₂ film 42 on the inside of the circular region to be zero with respect to 635 nm wavelength.

Thus, the light with 635 nm wavelength is all transmitted through both the outside and the inside of the circular region of the aperture control device 5. On the other hand, the light with 785 nm wavelength is all transmitted through the inside of the circular region.

Applicant also noted that at Column 16, lines 46-52, the Katayama reference describes a similar set of circumstances with respect to the aperture control device depicted in his Figure 17 B.

Consequently, Applicant took the position that the device disclosed by the Katayama reference as being an "aperture control device" cannot accurately be characterized as a "lens" having the characteristics claimed in the present application (1) because the inner and outer portions of the device disclosed by Katayama have different thicknesses, and (2) because the inner and outer portions respectively act like a transparent sheet and a phase retardation film with respect to one wavelength, and as total reflector and a transparent sheet with respect to the other wavelength quite unlike the "lens" of the present application.

Further, Applicant argued that it was important to note that in the Katayama reference the “aperture control device” is disposed between an objective lens and a collimating lens and that consequently it does not make any logical sense in the context of the Katayama reference (wherein light of two different wavelengths are to be separated from one another) for the aperture control element to be the same as, or somehow equivalent to, a “lens” as contemplated by the present invention. In support of the latter position it was noted that Katayama indicates at Column 8, lines 62-67, that light from collimator lens 4 passes through aperture control device 5 and enters objective lens 6 *as collimated light*. Therefore, Applicant pointed out that the structure and function of the Katayama aperture control device are totally different from the presently claimed “lens”

Despite the foregoing, the Examiner in the currently outstanding Official Action nevertheless again has taken inconsistent views of the language utilized in presently pending Claim 6 in order to reject that claim based upon the Katayama reference.

Specifically, present Claim 6 recites that the lens is *provided with* a reflecting part on its plane surface and the Examiner at one point characterizes the Katayama reference as disclosing a “lens” in the form of a transparent, flat substrate having a planar surface *upon which a reflecting part is provided*. Further, at the third paragraph of page 3 of the currently outstanding Official Action, the Examiner asserts that Applicants’ argument to the effect that the surface of the Katayama “lens” is not planar because the reflecting film is deposited only on part thereof (i.e., the reflecting part is deposited only on the outer peripheral part of the planar surface of the substrate) is incorrect. The basis of this assertion apparently is that the surface of the substrate 40 (Figs. 16A and 16B of Katayama) upon which the reflective material is deposited is an essentially “planar surface”, thereby defining the “lens” in Katayama as being the substrate 40.

The problem with the latter position, however, is that it is contrary to the position that the Examiner took at paragraph 1 of page 3 of the currently outstanding Official Action (i.e., that the objective lens 6 and the aperture control device 5 in the Katayama reference together constitute the lens as herein claimed).

Accordingly, it will be seen that the currently outstanding Official Action is unclear (and, in fact, internally inconsistent) with regard to which elements of the Katayama reference the Examiner equates with the term “lens” as used in Claim 6 of this application. This is particularly the case because the objective lens 6 in Katayama has the same diameter as the aperture control device, but has no plane surfaces as herein claimed. Therefore, the basis for the Examiner’s summary dismissal of Applicants’ previous discussion concerning the word “lens” and the manner in which that term should be interpreted is not supported consistently within the currently outstanding Official Action. Specifically, the currently outstanding Official Action characterizes the “lens” of the reference upon which it relies in two significantly different ways. In addition, this internal inconsistency is contrary to the Examiner’s desire to provide the term “lens” as used in the preamble of Claim 6 with no patentable weight on the basis that it is merely a recitation of purpose “where the body of the claim does not depend on the preamble for completeness”.

As a result, if one construes the Examiner’s argument to be that the lens is the transparent flat substrate of Katayama’s aperture control device that has one or more film and/or adhesive layers deposited thereon at differing locations as shown in Fig. 16A - 17B, it is to be recognized that the different characteristics and thicknesses of the film layers on the transparent substrate allow incoming light to either be transmitted or reflected according to the waveband thereof.

Nevertheless, given the differences in materials used, the numbers of interfaces present between the layers and the different numbers of layers disposed on different areas of the plane surface of the transparent substrate, it is clear that the differences in film thickness, the differences in film material and the differences in planar area covered by the respective films all tend to suggest that the aperture control device of the Katayama reference will not act like a mirror adjacent to its periphery and like clear glass in its middle portion as does the present invention.

In view of the foregoing, and the similarity of “being provided with a reflecting part” and “upon which the reflecting part is provided”, Applicants now are proposing that Claim 6 be amended so as to indicate that the plane surface of the claimed lens “defines” a reflecting part so as to clarify the heretofore inherent point that the surface of the lens reflecting part is essentially planar (i.e., any films deposited on the planar portion of the claimed lens do not significantly detract from its planar nature as the films disclosed by the Katayama reference detract from the planar nature of the surface of the substrate upon which they are located).

Alternatively, if the Katayama “lens” is somehow deemed to be a combination of the aperture control device *and* the objective lens as those elements are depicted in the Katayama reference, Applicants respectfully submit that that combined structure would never evidence a planar surface disposed normal to the incoming collimated light.

Applicants view the phrase “*defining* a reflecting part” not as being a limitation determinative of a boundary of a reflecting part, but rather as an indication that the planar surface is characterized in that that surface *essentially includes as part of itself* the reflecting part, whether that reflecting part be coterminous with the plane surface or only constitute an area located within the borders of the plane surface.

In this regard, Applicants view a single thin film layer on a planar surface of an underlying structure to be effectively the same as the planar surface with the reflecting part formed as a part thereof in contradistinction to the multilayer film structure of Katayama. In addition, Applicants respectfully note that the term “defining” is not limited to characterizing the entire area of the plane surface, but rather may characterize part or all of its area as a reflecting part. Applicant respectfully submits that the previous phraseology “provided with” conveys the same idea as long as the latter phraseology is not read so broadly that *any* reflecting part might be provided on the plane surface. The reason for this is that that logic would not require the outer surface of the reflecting part to be parallel to the plane surface as is clearly at least implied by the present wording and would be allowed by the use of the phrase “provided on”.

Accordingly, since the phraseology “defining” is respectfully submitted to more clearly and definitely set forth the boundaries of the subject matter Applicant regards as his invention without alteration of the present claim scope, Applicant respectfully submits that entry of the foregoing amendment of Claim 6 of this application is appropriate and should be granted in response to this communication.

New Claim 41 essentially constitutes the wording of previous Claim 6 wherein phraseology has been added for the purpose of defining a curved surface and specifying the fact that the plane and curved surfaces make up a single surface of the lens. New Claim 42 is the same as original Claim 7 but dependent on New Claim 41. Support for these new claims is found at Figs. 1(a) and 1(b) and at page 21, lines 7-12 and 20-25 of the present specification.

In the latter regard, Applicant again notes that the “lens” of the present invention is consistently referred to throughout the present specification as indicating a “single lens” as distinct from a “lens” made up of one or two true lens elements in combination with an aperture control device as disclosed by the Katayama reference and referred to by the Examiner at least in the alternative as “a lens”.

Therefore, it will be seen that the proposed new claims clarify that the plane surface being provided with (i.e., “defining”) a reflecting part constitutes in combination with a curved surface a surface of a “single lens” the same structure as contemplated throughout the specification and claims as originally filed.

Applicant respectfully submits, therefore, that neither amended Claim 6 nor new Claims 41 and 42 introduce any new matter into the present application. Further, Applicant respectfully submits that Claims 6 and 7 as hereinabove amended and new Claims 41 and 42 are in condition for allowance, or at least place this application in better form for Appeal as required by 37 CFR 1.116, and should be granted entry into this application and allowed in response to this communication. A decision so holding in response to this submission is respectfully requested.

In summary, Applicant respectfully submits that in the event that the Examiner grants entry to amended Claims 6 and 7 as well as new Claims 41 and 42, Claims 6-7, 10-19, 22-36 and 38-42, of this application will be in condition for allowance. A decision so holding and allowing Claims 6, 7, 10-19, 22-36 and 38-42 in response to this communication, therefore, is respectfully requested.

Finally, Applicant believes that additional fees are not required in connection with the consideration of this response to the currently outstanding Official Action. However, if for any reason a fee is required, a fee paid is inadequate or credit is owed for any excess fee paid, you are hereby authorized and requested to charge and/or credit Deposit Account No. **04-1105**, as necessary, for the correct payment of all fees which may be due in connection with the filing and consideration of this communication.

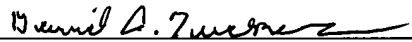
Respectfully submitted,

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